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Providing Physical Therapy Services in the Least Restrictive Educational Environment

Judy E. Bahe
University of North Dakota

PROVIDING PHYSICAL THERAPY SERVICES IN THE LEAST RESTRICTIVE EDUCATIONAL ENVIRONMENT

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Judy E. Bahe
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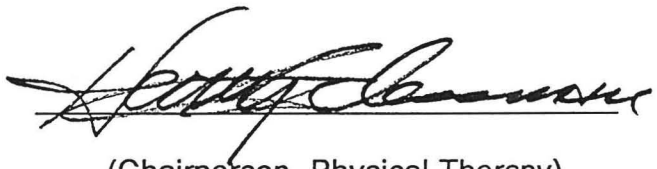

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Signature Judy E. Bahr

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ABSTRACT

Federal legislation has mandated free appropriate public education for all children with disabilities. Physical therapy is included as one of the related services which must be provided, if needed, to assist students with disabilities to benefit from the educational programs. This creates unique challenges for the physical therapist, who traditionally has provided services in a medical model rather than an educational model. The American Physical Therapy Association has published policies and guidelines for providing physical therapy services in the educational environment; however, each state is encouraged to adapt the guidelines to meet individual needs.

This paper provides a general review of the federal mandates and physical therapy services in the educational environment. It also describes the least restrictive environment, various physical therapy services provided, team models utilized in the educational environment and direct versus indirect physical therapy services.

A continuum of options for providing physical therapy services in the least restrictive environment is presented in this paper. The appendices also include proposed state guidelines for the sections on Least Restrictive Environment and Delivery of Services for physical therapists working in the educational environment in North Dakota.

CHAPTER I

INTRODUCTION

The North Dakota Physical Therapy Association has requested statewide guidelines for providing physical therapy services in the educational environment. The American Physical Therapy Association's Section on Pediatrics has published policies and guidelines, but recommended each state adapt it to meet individual needs.[1] Several states have already completed this project. In September of 1991, thirteen physical therapists who work primarily in pediatrics and provide services for educational programs met to discuss guidelines for North Dakota. A list of possible sections for these guidelines was developed. One of the major sections was the area of provision of physical therapy services within the least restrictive environment.

The Education of the Handicapped Act[2] (EHA) was originally passed in 1970 and amended in 1974. This original special education act was developed as a result of strong advocacy groups, civil rights movement of the 1960s, several state and federal court cases related to the 14th Amendment and a congressional study in the early 1970s. The congressional study showed there were at least 8 million handicapped children with at least 1 million of those receiving no education program at all. The study also found at least 4 million handicapped children who were not receiving appropriate educational services for their individual needs.[3]

In 1975, the Education for All Handicapped Children Act,[4] Public Law 94-142 (PL 94-142), was passed as an amendment to the EHA. PL 94-142 was much more powerful than the EHA and also included funding issues. A free, appropriate public education was mandated for all children, specifically all handicapped children. Several additional amendments have been passed and in 1990 it became known as the Individuals with Disabilities Education Act (IDEA).[3,4,5]

IDEA was a thorough overhaul of PL 94-142 and expanded several sections of PL 94-142. IDEA placed more emphasis on the child or children and on transition service to post-school activities rather than on the disability. It also promoted services for the children with severe or multiple disabilities because they had previously been the least served by or most excluded from education programs.[3]

IDEA mandates that services be provided in the least restrictive environment.[6,7] This mandate refers to special education and related services for all the student's educational needs. A continuum of least restrictive placement options should be considered for placement of a student in an educational program. Provision of necessary related services in the least restrictive environment must also be evident.[1,3] State regulations will vary but must be at least consistent with IDEA.

Providing physical therapy in the educational setting has presented a unique challenge for the physical therapist. The services provided must have

educational significance since physical therapy is a related service.[1,7,8] This related service must also be appropriate and be provided in the least restrictive environment. This change to an educational model from a medical model is difficult at times. Several examples of physical therapy interventions as part of an educational plan will be provided.

Decisions regarding the actual delivery of therapy services must be based on the local school district's guidelines. Options for delivery of therapy services include one-to-one direct therapy, group sessions, consultation, evaluation, assessment, and monitoring.[1,9] It is difficult to provide specific guidelines stating when direct versus indirect therapy should be provided. The decisions must be based on the individual student's abilities and program, and are made by the team that develops the Individual Education Program or Plan, called the IEP.[1]

The physical therapist is but one member of the team in the educational environment. There are three main team approaches, including multidisciplinary, interdisciplinary, and transdisciplinary team approaches. The transdisciplinary team approach with integrated therapy is the least traditional, but is currently promoted as the model of choice.[9]

Physical therapy in educational environments is referred to as a related service. A continuum of least restrictive options/placements should be reviewed for each student receiving physical therapy services in the educational environment, so the outcome has a functional basis for the student. The

services must be appropriate and educationally related, which presents unique challenges for physical therapists who are medically oriented. This paper will present guidelines for use, but decisions regarding the specific type of physical therapy services and the type of team approach must be determined for each individual student through the IEP process.

CHAPTER II

REVIEW OF PHYSICAL THERAPY SERVICES IN SCHOOLS

Prior to 1975, there are few references in the physical therapy literature describing or discussing physical therapy services in the schools. After 1975, numerous articles appeared regarding various approaches or models for providing physical therapy services in the educational environment. However, the recommendations have been based on opinion surveys of school administration, teachers, and related services personnel rather than on objective outcome measures involving individual student data for skill acquisition related to specific service models or approaches.[8,10-13]

Historically, physical therapy has been based on a medical model, with services being provided on a one-to-one basis in a special therapy department or setting. Physical therapy services in the schools were initially based on this same model for only a select number of students with physical disabilities and/or mild to moderate mental retardation. The services were generally provided in a self-contained facility or isolated classroom.[8,11,12]

In 1933, Lommen[14] described the general attitude of the times in regard to segregation of the physically disabled student in order to receive free education. The education considered "the physical, medical, academic, vocational, sociological, and psychological needs of these children as individuals."[14] Lommen[14] also commented on the potential of these children to return to

"normal" classroom placements. Identification of the need for therapy services may have been the primary factor in determining the student's placement in a particular facility or classroom. This concept would have automatically restricted the student's placement.[13-17] This concern was discussed as early as 1957 by Waddell[15] and more recently by Bleck[16] and Mullins[17].

By 1975, most states were providing educational services to at least some children with disabilities. A few states had educational programs for all children with disabilities.[6] In November of 1975, Public Law 94-142[4] (PL 94-142) was signed by President Gerald Ford. This act was known as the Education for All Handicapped Children Act and mandated a free, appropriate education for all children with disabilities. This included the severely and multiply handicapped children who had been frequently excluded from public school programs. Several amendments to the EHA and PL 94-142 have been passed, and in 1990 PL 94-142 became known as the Individuals with Disabilities Education Act[5] (IDEA), Public Law 101-476.[3,6]

IDEA expanded on the roles and responsibilities of related services providers and the issue of "least restrictive environment." Physical therapy is included in the related services. Therefore, the physical therapy services being provided in the educational environment must be related to the educational program.[1,3] This is a significant change from the medical model where the physical therapist provides one-to-one direct services to improve physical or functional capabilities. The medical model influence seeks to discover the

cause of the symptoms and then direct intervention towards that cause. This differs with the educational model influence of school personnel which emphasizes functional content and compensatory strategies based on task analysis with a behavioral approach in spite of the cause of the deficits.[8,18]

The least restrictive environment (LRE) issue was also expanded in IDEA. The greatest number of court cases involving special education law involve LRE or placement disputes and are generally related to financial issues.[3] The student's placement in a specific classroom or school is to be based on the student's unique needs, not on budgetary factors of the school district nor on convenience for school personnel or administration. LRE refers to providing education for children with disabilities through inclusion with their nonhandicapped peers in the regular education program to the maximum extent possible. The program must not violate the free, appropriate public education for any of the students. LRE is not defined as full day mainstreaming or full-time inclusion of all children with disabilities into regular classrooms; however, this may be the LRE for some of those children. Related services personnel play an important role in making an educational environment least restrictive.[3]

The physical therapist's role in the school setting broadened with the passage of EHA/IDEA. The school-based physical therapy services include screening, evaluation, treatment, program planning, consultation, communication, administration, and education for school staff, students, and parents.[1,8] Issues which may require input from the school-based physical

therapist include safe transportation methods, playground equipment, accessibility, mobility, and positioning the student for function and appropriateness of adaptive physical education. Administrative issues may include caseload size, reimbursement for services, documentation, service delivery decisions, and retention strategies.[19,20]

Team approaches or models of service delivery for related services in the public schools have been described and discussed in the physical therapy and educational literature.[6,7,9,16,19,21-26] The majority of the literature does not include any objective outcome on effectiveness. The three most common team models discussed in the literature include multidisciplinary, interdisciplinary, and transdisciplinary models.[9,18,24-26]

The multidisciplinary model is similar to the medical treatment model with which most physical therapists are familiar.[24,26] In this model, each specialist works individually with the student in relative isolation from other specialists who also evaluate and serve the student. No formal attempt is made to prioritize the student's needs or consider any overlap of services. Each discipline provides intervention independently of other disciplines. The results of evaluations and programming are reported by each discipline at staffings according to their own discipline biases. This approach makes it difficult to look at the whole student based on the fragments of information.[24,26] A concern with this approach is the lack of compliance in terms of the LRE. Therapy is provided in an isolated

setting rather than in the natural occurring environment or with nonhandicapped peers.[26]

The interdisciplinary approach expanded on the multidisciplinary approach by including a case manager to organize and coordinate the services provided to the student with disabilities. The evaluations are done individually by each specialist and the intervention is specific to each discipline, similar to the multidisciplinary approach. However, the priorities and programming decisions are made by the entire team, coordinated by the case manager. This allows for increased interactions between the various disciplines. The LRE concern expressed with the multidisciplinary approach is also expressed with the interdisciplinary approach. Although there is improved communication and interaction, the evaluations and interventions are still provided in isolated settings or special therapy rooms.[26]

The transdisciplinary team approach grew out of the parent-implemented early intervention programs in the 1960s.[24] This model is based on mutual dependence and shared responsibilities among the specialists involved with each individual student with disabilities. The team works together to assess the student and then design, implement, and monitor the effectiveness of the comprehensive program to meet the educational needs of the student.[24-26] The transdisciplinary model emphasizes continuous communication and consultation between the various team members.[24]

Implementation of a true transdisciplinary model frequently meets with resistance from related services personnel because of their medical model background.[26] This model does not mean a discontinuation of direct services. Specialized intervention may still be provided; however, it is provided within the classroom setting rather than in an isolated setting. Direct, hands-on contact with the student is necessary for effective consultation and integration of the educational goals throughout the day and in natural environments or the LRE.[24,26]

The multidisciplinary team includes the parents, the student when appropriate, a school administrator, the special education teacher or case manager, and any other specialists involved in the student's programming.[1,24,26] This team must determine the most appropriate team approach for the individual student based on the student's specific needs and goals. Currently most school districts adopt a single team model rather than utilizing a variety of models for providing special education programming and related services.[26]

Historically, physical therapy has been based on a medical model in schools as well as in residential and hospital settings. With the passage of the federal legislation now known as IDEA of 1990, physical therapy in the educational environment became a related service and must be educationally significant. All children with disabilities are entitled to a free, appropriate education in the least restrictive environment with the support of related services as needed. The need for these related services is determined through

the Individual Education Plan or IEP process with established goals to improve functional skills and to be successful in the educational setting.[6]

Physical therapy services in the educational environment include screening, evaluation, treatment, program planning, consultation, administration, and education.[19,20] The physical therapist in the educational environment provides these services as a member of a multidisciplinary team, which includes the parents and may include the student. The team must communicate and work effectively together to provide the most appropriate services to meet the student's specific needs in the least restrictive environment or most natural setting for functional outcomes.[1,9,18,24-26] The interdisciplinary and transdisciplinary team approaches are recommended because of opportunities for inclusion or integration of students with disabilities into natural occurring environments with their nonhandicapped peers when appropriate.[1,9,18,24-26]

CHAPTER III

LEAST RESTRICTIVE ENVIRONMENT

The principle of the "least restrictive environment" (LRE) is considered one of the most important issues pertaining to students receiving special education services.[25] It is the issue involved in the greatest number of court cases related to educational programs and is generally related to money.[3] The LRE mandate applies to related services including physical therapy as well as to special education.[1] This chapter will describe LRE in general terms of placement as well as in more specific terms for the provision of physical therapy services.

Placement of children in the LRE means that children with disabilities are to be educated with their nonhandicapped peers in regular education programs and classrooms to the maximum extent appropriate, without violating a free appropriate public education for any of the students.[3,17] This does not necessarily mean mainstreaming or full inclusion of the student with disabilities into the regular education classroom. The decision as to the degree of inclusion is determined by the team based on the individual student's needs. This is a safeguard to prevent any unnecessary segregation of a student from the regular classroom.[27]

Alternative placements are discussed at the student's Individual Education Plan or IEP meeting. The student is not locked into a specific placement for his/her entire educational programming years as the placement is reviewed at

least annually. The placement is not an "either-or" decision nor a "one-time only" decision.[27] Integration or inclusion is dynamic and allows movement between more restrictive and less restrictive options as the student learns new skills or as the unique needs of the student change.[17,28] A continuum of placement options from least restrictive to most restrictive placement option is listed in Table 1.

Related services must also comply with the LRE mandate.[1,6,9] Traditionally, students need physical therapy services were removed from the regular classroom at a scheduled time to receive therapy in a special room.[1] This should be considered as a last resort, as it is the most restrictive and least integrated option. The American Physical Therapy Association guidelines encourage physical therapists to focus on natural opportunities in integrated environments. This involves emphasis on strategies for intervention rather than on places. It also implies identifying strategies other team members may use throughout the student's day.[1]

TABLE 1

CONTINUUM OF GENERAL LEAST RESTRICTIVE

EDUCATION OPTIONS

LEAST RESTRICTIVE	1.	Regular classroom, full day
	2.	Regular classroom with assistance from a resource teacher
	3.	Regular classroom with assistance from an itinerant teacher
	4.	Regular classroom, part day and resource classroom, part day
	5.	Self-contained special education classroom within regular school building
	6.	Split time between regular school campus and special education campus
	7.	Special school campus, all day
	8.	Public institution
	9.	Hospital setting
	10.	Private agency
MOST RESTRICTIVE	11.	Homebound program with no opportunities to interact with nonhandicapped peers

(Modified from Mullins J. New challenges for physical therapy practitioners in school environments: some limitations in Phys Occup Ther Pediatr 1983;3(4):9-16[17] and Martin R. Least Restrictive Urbana, IL: Carle Medical Communications, Videotape; 1989.[28])

A proposed continuum of options for providing physical therapy services in the LRE is listed in Table 2. The options include both direct and indirect

TABLE 2

CONTINUUM OF PHYSICAL THERAPY LEAST RESTRICTIVE

EDUCATION OPTIONS

LEAST RESTRICTIVE	1.	Physical therapy consultation provided to classroom and/or physical education teacher(s)
	2.	Procedures carried out in regular and/or physical education class by staff trained by physical therapist with program monitored on a regularly scheduled basis by physical therapist
	3.	Specialized techniques provided directly by physical therapist in regular classroom and/or physical education class
	4.	Individual/small group physical therapy services provided on pull-out basis from regular classroom
	5.	Physical therapy services provided in resource room with student attending part day in resource room, part day in regular classroom
	6.	Physical therapy services provided in self-contained special education room with student full day in self-contained room
	7.	Educationally related physical therapy services provided in non-school setting, such as hospital or rehabilitation center, private agency, day care, work environment, residential center, or home
MOST RESTRICTIVE	8.	Non-educationally related physical therapy services provided in non-school setting, such as hospital or rehabilitation center, private agency, day care, home, or residential center.

therapy services. Direct services may be provided in either integrated regular classroom settings or in isolated areas within the school building, dependent on the individual student's unique needs. Specialized techniques, such as joint

mobilization to achieve improved movement for participation in specific educational activities, may be carried out in the regular classroom. The physical therapist may determine it is not appropriate for other staff to be instructed in these techniques due to the specialization, medically-related nature and precautions of these techniques. Therefore, this is considered a more restrictive option because the physical therapist may not always be available when the techniques would enhance the student's function.[9] The physical therapist may train staff in other techniques, such as range of motion, ambulation, and positioning, which may be carried out by the trained staff whenever beneficial for the student during the day. Adaptive equipment, including standing devices and ambulation aids, are being used more frequently and effectively for educational functioning in the regular classroom and/or physical education program.[17]

Indirect services would include training of school staff to follow through with programs for positioning, range of motion, and ambulation, for example.[1] Another indirect service the physical therapist may provide is educational inservices or programs for regular education students to enhance their understanding of children with disabilities and their individual needs.[9]

In conclusion, LRE refers to providing educational programs and educationally related services for children with disabilities in classrooms with their nonhandicapped peers to the maximum extent possible. This mandate applies to special education services and to related services, including physical

therapy.[1,3] A continuum of general classroom and/or building placement options as well as a proposed continuum of physical therapy options have been presented.

CHAPTER IV

DELIVERY OF PHYSICAL THERAPY SERVICES

IDEA mandates "a free appropriate public education" with emphasis on special education and related services specifically designed to meet the individual needs of children with disabilities and to "assure the effectiveness of efforts to educate children with disabilities."[3] Physical therapy is specified as one of many related services affected by the federal mandates.[8] However, the specific physical therapy services are not listed nor is the model or method for delivery of those services listed. This chapter will briefly discuss the types of physical therapy services which may be provided in the school environment, the difference between direct and indirect services, and team approaches which may be utilized to provide the physical therapy services in the educational environment.

Scope of Physical Therapy Intervention

The American Physical Therapy Association guidelines have outlined several services which may be provided by the physical therapist within the educational environment.[1] These services are all directed towards assisting children with disabilities to participate in and benefit from appropriate individualized educational programs. These services include screening, assessment, program planning, intervention, communication, consultation, education, and administration/documentation.[1,8,20]

Screening involves observing children and/or reviewing written and/or verbal information to identify previously undetected problems. Screening can be used as a tool to determine the need for more formal testing or evaluation. Examples of physical therapy screening include scoliosis and gross motor screenings.[1,8]

Assessment or evaluation may be requested by the multidisciplinary team involved with the student but requires written consent from the student's parents. The information obtained from the evaluation is used in developing an Individualized Education Plan, IEP, or for providing recommendations for any modification, equipment, or procedures necessary to meet the student's needs. The evaluation may involve formal standardized tests as well as nonstandardized tools, which will not be discussed in this paper.[1]

Recommendations for long-term goals, short-term objectives, frequency, and duration of physical therapy services are made based on the results of the evaluation. The goals should be educationally related and made in collaboration with other team members, which briefly describes the service of program planning.[1,8]

Intervention is the actual treatment or provision of therapy services to students with a need for the physical therapy services.[1,8] The intervention may be direct, hands-on contact or indirect, which includes supervision and monitoring.

Communication is necessary to assure a better understanding of each team member's role, a better working relationship with parents and more complete service for the student with disabilities. The physical therapist should be in contact with any other physical therapists who may be working with the student outside the school setting as well as with any physicians, specialty clinic groups, or equipment vendors serving the student.[1]

Consultation involves interaction with any teachers, administrators, parents, or other professionals concerning the needs of a student with disabilities and the services necessary to meet those needs. This may also include consultation to improve the effectiveness and efficiency of the delivery system.[1,8,30-32]

Education is one service that has been frequently overlooked.[33] The school physical therapist is obligated to provide educational training for all personnel in the educational setting including regular education students. Education may be provided through formal and informal inservices and may cover a variety of topics.[1,8,33] Hardy and Roberts[33] introduced the Educational Needs Assessment (ENA) in 1989 as a tool for assisting in the development of effective and practical inservice programs.

Administration and documentation work together to provide a coordination of services and adequate recordkeeping to fulfill local, state, and federal requirements.[1,8,20]

Direct Versus Indirect Interventions

The specific physical therapy services may vary across state and local school districts, particularly in terms of the intervention or treatment and consultation sections. Several state guidelines were reviewed for descriptions of direct and indirect physical therapy services in the educational environment. Guidelines were reviewed from South Dakota,[30] Oregon (TIES),[31] Kansas (two editions),[32,34] Iowa,[35] Colorado,[36] Thief River Falls in Minnesota,[37] and North Carolina.[38] Although direct and indirect services are described separately, they do complement each other when comprehensive services are provided.[1]

Direct services were described in each of the guidelines reviewed. The services were characterized by individual or small group hands-on services provided on a regularly scheduled basis. The emphasis is on acquisition of specific motor skills or prevention of problems through therapeutic techniques.[30,32,34-37] Some examples of direct services include feeding, range of motion to prevent deformity, adaptive equipment, sensory integration, and initial stages of balance, gait training, and disability awareness training.[34]

Sections on indirect services varied in the state guidelines reviewed. The American Physical Therapy Association guidelines describe indirect services as including consultation which could consist of supervision, monitoring, teaching, planning and training, inservice training, and communication.[1] South Dakota,[30] Kansas,[32] and Iowa[34] guidelines listed consultation as a separate category. Consultation was described as student-related which focuses on the needs of a

specific student. Consultation could also be provided for colleagues which may involve providing information to help others understand and adapt to the student's disability or providing suggestions for modifications of materials or environment. Thirdly, consultation services may be provided for improving the effectiveness of the process for determining, designing, and implementing services or for addressing architectural barriers.[30,32,35]

Other indirect services outlined in the guidelines reviewed included monitoring of programs carried out by or reviewing data collected by teachers, aides, or parents, training of school staff in terms of positioning for functional abilities and supervision of the staff who carry out the programs.[1,8,30,32,34-37] All of these services were included in the guidelines reviewed; the difference was in the basic outline for the guidelines.

The direct and indirect services must overlap when providing comprehensive services. For effectiveness, provision of direct services implies a need for consultation with other staff as appropriate for carry-over in all environments. Indirect services or consultation, supervision, and monitoring imply a need for some degree of direct service to accurately assess the student's needs and provide appropriate recommendations and training for the program provided for the student.[1]

Team Approach

A team approach to provide services for students with disabilities is required by law.[1] However, the specific team approach used is determined by

the individual school district. The most frequently used team approaches are multidisciplinary, interdisciplinary, and transdisciplinary models or some variation of one of these models.[26]

The multidisciplinary model involves a variety of specialists working with the individual student with disabilities. The evaluations and interventions are completed independently by each discipline according to each one's own area of expertise. Evaluation results and student progress are reported by each discipline at a team staffing with no formal attempts to prioritize the student's needs or to consider possible overlap between various disciplines.[9,24,26]

This model is not recommended to be used in the educational environment because of the isolation between specialists. This may result in failure of the team to look at the whole child.[9,26] The therapy services may be considered the primary reason for the student to attend school, rather than placing primary emphasis on the educational program. The therapy services are to be considered as related services and are provided to support the student's educational program.[9] Therefore, the multidisciplinary model is considered appropriate in certain settings, such as hospitals or clinics, or to address a specific therapy need but is not in compliance with the role of related services as expressed in IDEA.[5,9]

The interdisciplinary model is an extension of the multidisciplinary model with more emphasis on communication and collaboration in determining the needs of the student, prioritizing those needs and for planning a program to

meet those needs.[9,24,26] The evaluations and interventions are provided independently of other disciplines, but there is less fragmentation of the services due to increased communication between disciplines and coordination of the services by the case manager.[24,26]

The disadvantages of the interdisciplinary model are similar to those of the multidisciplinary model and are related to the isolated and direct only services provided.[26,39] The goals determined in the IEP process for both the multidisciplinary and the interdisciplinary models are generally separate, discipline-referenced goals rather than common team goals. This often limits the effectiveness of the team and minimizes the importance of the educational services which should receive primary emphasis.[9,39]

Another educational disadvantage of the multidisciplinary and the interdisciplinary models is the failure to assess and assist the student with disabilities in the most natural occurring setting possible.[26,39] These models assume the evaluation results obtained in an isolated setting are representative of skills the student will demonstrate in natural environments, which may not be an accurate assumption.[26,39] This line of thinking also assumes that skills acquired during isolated therapy sessions will be generalized to functional activities in other environments.[39]

Giangreco[39] describes additional problems related to the multidisciplinary and the interdisciplinary models which utilize direct, isolated provision of services. Shortages of qualified related services personnel, especially in rural

areas, is a major concern because the number of specialists needed would be cost inefficient and frequently infeasible. It would also be extremely difficult for all specialists involved to coordinate schedules and establish daily routines for each individual student with disabilities without fragmenting the services or the educational program.[39]

In the past, attempts to provide the intensive related therapy levels in an efficient manner have led to more centralized, segregated settings for the students with disabilities. This is considered a more restrictive placement for the student which may not be the most educationally beneficial placement for the student.[39] Giangreco[39] discusses seven areas of concern in regard to centralized program locations. The concerns include long, static bus rides often associated with shorter instructional days, limited access of team members to family members, segregation from the natural environment, limited interaction with nonhandicapped peers during school and extracurricular activities, limited appropriate peer models, and limited opportunities for community awareness of the individual characteristics and needs of students with disabilities.[39]

The transdisciplinary model, or a variation of it, has been widely recommended as the model of choice in providing services in the educational environment to students with disabilities, especially those students with severe disabilities.[9,24,26,39,40] It was originally instituted to achieve optimal levels of effectiveness of residential care and early intervention programs.[9,26] The transdisciplinary team model is based on a philosophy of sharing or transferring

information and appropriate techniques across traditional boundaries of each discipline involved with the individual student.[9,26] The primary teacher or case manager assumes the role of the direct service provider but is dependent on the other team members for consultation, training, and feedback.[22,26] This allows the primary service provider to develop competence in many areas to provide consistency in the comprehensive program. As with the other team models already discussed, there are advantages and disadvantages or benefits and barriers to the transdisciplinary team model.[22,40]

Four major advantages to using a transdisciplinary team model were discussed by Sparling[22] and Ottenbacher.[18] The advantages included consistency of therapeutic input for the student with disabilities. There is also increased consistency in terms of appropriate environmental stimulation.

A second advantage is acceptance of the adult's needs and the child's need for growth and development. The "adult" goes beyond the teacher or primary care provider to include the parents, who frequently view themselves as accessories and play a passive role. The transdisciplinary team model provides the parents with the opportunity to grow and develop through an active role while recognizing the unique attributes of their child.[22]

Another advantage is the provision of a framework for continuing education in order to develop a nondefensive and trusting attitude throughout the school.[22]

The last advantage is encouraging transition from home and protected environments out into the community. The transdisciplinary team model is more effective in transferring students to regular classrooms which in turn promotes community awareness of students with disabilities. This allows reciprocal interaction of students with disabilities and the community, rather than a unilateral relationship of the community providing all the services and the student simply receiving those services.[18,22]

Sears[40] proposed the transdisciplinary team model is the most appropriate team model for compliance with the federal mandates for special education, related services, and LRE. Sears[40] described benefits for the team members who utilize the transdisciplinary team model as well as benefits for the student with disabilities, particularly a student with severe disabilities.

The benefits described for the team members include: 1) balanced use of competencies of each discipline; 2) expanded competencies of each team member; 3) increased communication and cooperation among the team members involved with services for each student with disabilities; and 4) development of an effective service delivery system representative of the collaboration among educationally and medically oriented service personnel.[40]

The benefits for the student with disabilities were: 1) an increase in services to the student without budgetary restrictions which could limit the number of related services personnel providing direct hands-on service; 2) a decrease in fragmentation of the student by each discipline; 3) maximized

instructional time; 4) continuity and consistency in program implementation to develop targeted skills and abilities; and 5) a comprehensive intervention program to meet all the needs of the student.[40]

There were several disadvantages or barriers identified by Sparling[22] and Ottenbacher.[18] The major concern was the resistance of professional staff to accept the "role release" concept of the transdisciplinary team model. Many professionals perceive this role release as giving away aspects of their individual disciplines and consider it diminishing in nature, threatening, and some even consider it illegal.[18,40]

Another barrier can be administrators' lack of knowledge of the value system that is the basis of the transdisciplinary team model. This lack of knowledge can interfere with attempts at establishing a continuing education framework for all staff.[22]

A third barrier involves the parents, who frequently feel a part of the team but cannot accept the role of program managers.[18,22]

Professional or related staff personnel who are reluctant to provide adequate consultation services become a fourth barrier. They are content with their own value system and do not evaluate the team's system and goals.[22]

The final barrier mentioned by Sparling[22] is the funding and time limitations often associated with continuing education programs. However, Sparling felt this barrier is not a major factor once the transdisciplinary team model is established in the school system.[22]

Ottenbacher[18] discussed differences in the professional belief system or value system, isolated educational and behavioral background of various professionals, specifically therapists who enter the transdisciplinary team model, and issues of professional and legal liability as obstacles to the implementation of a transdisciplinary team model. These issues all included concerns regarding educational model versus medical model along with "role release." Ottenbacher[18] suggested professionals should become aware of various practice models during their educational training. The training should include philosophical differences and similarities, potential limitations, and areas of concern in the delivery of services of various team approaches.[18]

Giangreco[39] presented an alternative service delivery model based on the transdisciplinary team model. He suggested therapy services be provided using an indirect, integrated, and decentralized approach.[39] This approach refers to collaborative effort among all team members to assess, plan, implement, evaluate, and report progress on the common needs and goals of the student with disabilities. An indirect approach does not infer the elimination of all direct involvement by the professionals. Direct interaction is necessary but is generally more flexible in nature with increased sharing of knowledge and expertise with other team members.[39]

It is very unlikely that any one team model will meet the needs of all students with disabilities in all or even in most educational environments. The team members involved with each individual student with disabilities must work

together to determine the most appropriate team model for the student in order to maximize the student's potential for useful and meaningful participation in the community and for self-fulfillment.[39]

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Federal legislation, most recently the IDEA of 1990,[5] has mandated appropriate education services for all children, including children with disabilities. The mandate refers to many issues of education including special education, related services, least restrictive environment (LRE), and a team approach in assessing the needs of the student with disabilities as well as designing, implementing, and monitoring the effectiveness of the specially designed education program.[1-5] However, the regulations do not identify the specific type of service delivery system because the programs designed must meet the educational needs of the individual student with disabilities.

The American Physical Therapy Association has published policies and guidelines, but recommended each state adapt it to meet individual needs.[1] A continuum of options should be outlined because of the diverse needs among students with disabilities. The continuum should cover LRE as well as the model of service delivery, ranging from direct to indirect services, including various consultation options and monitoring.

Based on the information obtained and reviewed for this independent study, it is recommended the state guidelines include:

a. LRE section which would include a brief description of the principle of LRE in general education placements as well as provide a continuum

of options for providing physical therapy services in the LRE. (Appendix A)

b. Delivery of Services section which would include definitions for the various services the physical therapist could be asked to provide. This includes screening, assessment, program planning, intervention, communication, consultation, education, and administration/documentation. Direct and indirect services should also be outlined to provide uniformity across the state. The description should include minimum frequency for student contact. A description of the most commonly utilized team models should also be included. The team models are multidisciplinary, interdisciplinary, and transdisciplinary. (Appendix B)

It is also recommended that statewide guidelines be established to provide basic information to physical therapists regarding physical therapy services in the educational environment in North Dakota. The guidelines would serve as a resource for physical therapists as well as school administrators and special education personnel. Consistency in terms of terminology, service delivery models, scope of services, and team models would be improved by using a common set of guidelines.

The proposed state guidelines are to be presented to the North Dakota Physical Therapy Association Quality Assurance Committee for review and approval. The guidelines would also be reviewed by the Comprehensive

System of Personnel Development Task Force on Physical Therapy. This Task Force was established in December 1992 by the North Dakota Department of Public Instruction to review and make recommendations regarding physical therapy needs, concerns, and issues in the school setting. The Task Force is comprised of several physical therapists as well as Special Education personnel. The physical therapy guidelines may also be utilized by the Department of Public Instruction as part of a statewide manual on special education and related services in North Dakota school districts.

APPENDIX A

LEAST RESTRICTIVE ENVIRONMENT

(PROPOSED STATE GUIDELINES)

The principle of least restrictive environment, LRE, is one of the most important issues pertaining to students who receive special education services. Special education is now described as specially designed instruction which can occur in a variety of situations or environments and is not confined to a special class or resource room.

LRE refers to providing education for children with disabilities through inclusion with their nonhandicapped peers in the regular education program to the maximum extent possible. LRE is <u>not</u> defined, without exception, as full day mainstreaming or full-time inclusion of all children with disabilities into the regular classroom. The decision as to the degree of inclusion is determined by the multidisciplinary team based on the student's unique needs. This is a safeguard to prevent any unnecessary segregation of a student from the regular classroom. Integration or inclusion is dynamic and allows movement between more restrictive and less restrictive options as the student learns new skills or as the unique needs of the student change.

The LRE mandate applies to related services, including physical therapy, as well as to special education. The school-based physical therapist is encouraged to focus on natural opportunities in integrated environments, and on strategies for intervention rather than on places for intervention. This implies identifying strategies other team members may use throughout the student's day. This allows the student with disabilities to benefit from special eduction, which meets the mandate of the LRE.

A continuum of options for providing physical therapy services in the LRE may include the following, moving from least restrictive to most restrictive.

1. Physical therapy consultation provided to classroom and/or physical education teacher(s);

2. Procedures carried out in regular classroom and/or physical education class by staff trained by physical therapist with program monitored on a regularly scheduled basis by physical therapist;

3. Specialized techniques provided directly by physical therapist in regular classroom and/or physical education class;

4. Individual/small group physical therapy services provided on pull-out basis from regular classroom;

5. Physical therapy services provided in resource room with student attending part day in resource room, part day in regular classroom;

6. Physical therapy services provided in self-contained special education room with student full day in self-contained room;

7. Educationally related physical therapy services provided in non-school setting, such as hospital or rehabilitation center, private agency, day care, work environment, residential center, or home;

8. Non-educationally related physical therapy services provided in non-school setting, such as hospital or rehabilitation center, private agency, day care, home, or residential center.

The physical therapy services provided in the educational environment must be related to the educational program by assisting the student with disabilities in benefitting from the educational program, in the least restrictive placement possible.

APPENDIX B

DELIVERY OF SERVICES

(PROPOSED STATE GUIDELINES)

1. Scope of Physical Therapy Services

There are a variety of services which may be provided by the physical therapist within the educational environment. The services include screening, assessment, program planning, intervention, communication, consultation, education, and administration/documentation. These services are all directed toward assisting students with disabilities to participate in and benefit from appropriate individualized educational programs.

a. Screening: Process of observing students to identify previously undetected problems. This may also involve reviewing written and/or verbal information to determine the need for formal physical therapy evaluation.

b. Assessment/Evaluation: Process of obtaining and interpreting data in terms of the student's abilities in the educational environment. This requires written consent from the student's parents or guardian prior to testing. This may include formal standardized and non-standardized tools. The information obtained is used in developing an Individualized Educational Plan, IEP, or for providing recommendations for any modifications, equipment, or procedures necessary to meet the student's needs.

c. Program Planning: Development of an IEP in collaboration with other team members based on identified needs of the student obtained through evaluation. This includes recommendations for long-term goals, short-term objectives, frequency of service, and duration of service.

d. Intervention: Actual treatment or provision of services for a student identified as needing physical therapy services. The services may be direct, hands-on contact or indirect contact such as consultation, supervision, or monitoring of the program.

e. Communication: Contact between the school-based physical therapist and other people working with the student to facilitate comprehensive

services for the student. This includes contact with any physicians, private agencies, specialty clinic groups, and equipment vendors serving the student.

f. Consultation: Interaction with any teachers, school administrators, parents, other professionals, and other school personnel concerning the needs of a student with disabilities, the services necessary to meet those needs, the effectiveness and efficiency of the service delivery system as well as any architectural barriers.

g. Education: Teaching and training of students, parents, and all school personnel through formal and informal inservices covering a variety of topics. Topics may include positioning and handling, range of motion exercises, safety issues, disabilities, normal development, service delivery models, and the role of physical therapy in the schools.

h. Administration/Documentation: Coordination and implementation of appropriate physical therapy services with adequate recordkeeping to fulfill local, state, and federal requirements. Administrative issues may include caseload size, reimbursement for services, service delivery decisions and retention strategies. Documentation may include educational referral, physician referral, parental permission, assessment results, goals and objectives, progress data, home and school programs, student contacts, and other contacts with outside personnel or agencies.

2. Models of Service Delivery

Models of service delivery for physical therapy include direct and indirect services. Although direct and indirect services are described separately, they are complementary components of a comprehensive service delivery model. Direct services are provided by the physical therapist or physical therapist assistant but indirect services for training parents and school personnel for carryover in the actual environments are also needed for a comprehensive program. Indirect services imply the need for some degree of direct service in order to design, revise, and monitor the effectiveness of the program carried out by parents or school personnel.

The multidisciplinary team is responsible for determining a student's need for and the level of educationally related physical therapy services. This determination is based on the needs of the student in terms of educational goals, level of maturation, chronological age, expertise of educational personnel, and the severity and type of the student's disability.

a. Direct Service: Direct service is provided by the physical therapist or physical therapist assistant, according to the North Dakota Physical Therapy Practice Act and the Physical Therapy Rules and Regulations. Direct service is provided on a one-to-one basis or in a small group of 2 to 4 students per therapist. Direct service is provided on a regular, ongoing basis at least once weekly to either improve function or prevent loss of function in the educational environment. Direct services may be provided in a variety of educational settings, ranging from the regular classroom to a private therapy area in the school building.

   Direct services may include, but are not limited to, the following:

   1. Normalization of muscle tone in preparation for functional activities;
   2. Range of motion exercises;
   3. Therapeutic exercises for improving strength, endurance, and coordination;
   4. Functional motor skills;
   5. Postural control with emphasis on symmetry and stability;
   6. Gait training, with or without assistive devices;
   7. Functional mobility, including wheelchair, bicycle, tricycle, automobile, and access to public transportation;
   8. Positioning and body mechanics in classroom programming;
   9. Disability awareness training;
   10. Exercises for cardiovascular and respiratory function;
   11. Development, maintenance, and training for adaptive equipment and devices.

b. Indirect Service: Indirect service is provided by the physical therapist to assist those persons who are involved with the student's day-to-day educational programming. This may involve consultation regarding a specific student, modification of curriculum or materials, or system needs of the specific school district. Other indirect services include inservice training, both formal and informal programs for school personnel, parents and community, supervision of school personnel responsible for following through with a designed exercise or positioning program, and communication with other medical professionals or equipment vendors.

   1. Consultation: Sharing of professional knowledge

      a. Case consultation focuses on a specific student who is evaluated by the physical therapist. The therapist then designs an appropriate program, trains other staff to carry out the

program, and then periodically consults with the staff and observes the student.

b. Colleague consultation focuses on the needs of other professionals in the educational environment. This type of consultation is employed to improve the skills and knowledge of other professionals and may or may not be related to a specific student.

c. System consultation focuses on the effectiveness of the entire school system and addresses the needs of generic groups of students within the system. This type of consultation is used to assess architectural barriers, to develop long range goals for the district, or to provide district-wide parent training programs.

2. Monitoring: Watching or checking on a person

This is usually done in conjunction with case consultation and is provided to follow a student's progress. The therapist can update or revise the recommendations or program based on the observations of the therapist or the information provided by the staff or parents.

3. Communication: Sharing of information between involved individuals or agencies

This involves sharing of information on the student's status nd program with other medical professionals, agencies, or equipment vendors providing services for the student. This will facilitate services for the student both in and out of the traditional educational environment.

Direct and indirect physical therapy services are not separate levels of service but are complementary components of a complete service delivery system. There is an overlap of these levels when they are provided in the educational environment. The multidisciplinary team must consider the specific needs of the student and the focus of the IEP when determining the service delivery model. This should be done at least annually.

3. Team Models for Service Delivery

The multidisciplinary team is responsible for reviewing assessment results and the needs of the individual student, for determining priorities for programming objectives based on those needs, and for establishing and

implementing the specially designed educational program. A team approach for providing special education and related services is required by law, but the specific team model is not identified in the law. Most school districts operate within one or a variation of one of three team models. The most common team models include multidisciplinary, interdisciplinary, and transdisciplinary.

a. Multidisciplinary: This team model is similar to the medical treatment model in which each specialist works individually with the student in relative isolation from other specialists also working with the student. Evaluation and intervention are provided in an isolated setting rather than in the natural occurring environment or with nonhandicapped peers.

b. Interdisciplinary: This team model is similar to the multidisciplinary model, with the evaluations and interventions provided individually by each specialist. However, the priorities and programming decisions are made by the entire team, coordinated by the case manager. This results in improved communication and interaction between team members with less fragmentation of the student and his/her unique needs than is seen in the multidisciplinary model.

c. Transdisciplinary: This team model is based on mutual dependence and shared responsibilities among the specialists involved with the student. Continuous communication and consultation between the team members is emphasized to design and implement a comprehensive program for the student. Team members are encouraged to work together to assess the student and design, implement, and monitor the effectiveness of the educational program, carried out in the natural occurring environment rather than in an isolated setting.

It is very unlikely that any one team model will meet the needs of all students with disabilities in all or even in most educational environments. The team members must work together to determine the most appropriate team model to maximize the individual student's potential for useful and meaningful participation in the community and for self-fulfillment.

REFERENCES

1. Martin K, ed. Physical Therapy Practice in Educational Environments: Policies and Guidelines. Alexandria, Va: American Physical Therapy Association; 1990.
2. Education of the Handicapped Act of 1970. P.L. 91-230, 33 USC § 1400 et seq.
3. Thomas GJ, presenter. Update on Special Education Law: Workshop for Related Services Personnel in North Dakota. Interactive Video Network (IVN). Sponsored by North Dakota Department of Public Instruction and University of North Dakota Physical Therapy School; August 22, 1992.
4. Education for All Handicapped Children Act of 1975. P.L. 94-142, 33 USC § 1400 et seq.
5. Individuals with Disabilities Education Act of 1990. P.L. 101-476, 33 USC § 1400 et seq.
6. Coutinho MJ. How the past affects the present: Meeting student's needs in tomorrow's schools. In: Royceen CB, ed. School-Based Practice for Related Services. AOTA Self-Study Series. Rockville, Md: American Occupational Therapy Association Inc; 1991:lesson 1.
7. Cole KN, Harris SR, Eland SF, Mills PE. Comparison of two service delivery models: in-class and out-of-class therapy approaches. Pediatr Phys Ther. 1989;1:49-54.

8. Tada WL, Harris SR. Physical therapy in the educational environment. In: Connolly BH, Montgomery PC, eds. Therapeutic Exercise in Developmental Disabilities. Chattanooga, Tenn: Chattanooga Corporation; 1987;chap 12.

9. Giangreco MF, York J, Rainforth B. Providing related services to learners with severe handicaps in educational settings: pursuing the least restrictive option. Pediatr Phys Ther. 1989;1:55-63.

10. Mitchell LC. School-based physical therapy: a model for intensive delivery. Phys Ther Forum. 1986;5(43):1-4.

11. Connolly BH, Anderson RM. Severely handicapped children in the public schools: a new frontier for the physical therapist. Phys Ther. 1978;58:433-438.

12. McLaurin SE. Preparation of physical therapists for employment in public schools: a new approach. Phys Ther. 1984;64:674-677.

13. Roberts PL. Effectiveness outcomes of physical therapy in schools. Totline. 1988;14(3):31-35.

14. Lommen OL. The essentials of teacher training for crippled children's classes. Phys Ther Rev. 1933;13:116-117.

15. Waddell JF. The physical therapist in the school. Phys Ther Rev. 1957;37:744-745.

16. Bleck EE. Integrating the physically handicapped child. J Sch Health. 1979;49:141-146.

17. Mullins J. New challenges for physical therapy practitioners in educational settings. Phys Ther. 1981;61:496-502.

18. Ottenbacher K. Transdisciplinary service delivery in school environments: some limitations. Phys Occup Ther Pediatr. 1983;3(4):9-16.

19. Howard AM. Physicians, occupational therapists, and physical therapists: professional preparation and practice trends in serving individuals with developmental disabilities. Totline. 1986;12(3):13-19.

20. Martin KD. Current status of physical therapists in school settings. Totline. 1988;14(3):18-21.

21. Klepper S. Models of service delivery for related services in public schools: selected annotated bibliography. Totline. 1988;14(3):22-24,30.

22. Sparling J. The transdisciplinary approach with the developmentally disabled child. Phys Occup Ther Pediatr. 1980;1(2):3-16.

23. York J, Rainforth B, Giangreco MF. Transdisciplinary teamwork and integrated therapy: clarifying the misconceptions. Pediatr Phys Ther. 1990;2:73-79.

24. McCormick L, Goldman R. The transdisciplinary model: implications for service delivery and personnel preparation for the severely and profoundly handicapped. AAESPH Rev. 1979;4(2):152-161.

25. Geiger WL, Schilit J. Providing appropriate educational environments. In: Sternberg L, ed. Educating Students with Severe or Profound Handicaps. Rockville, Md: Aspen Publishers Inc; 1988:chap 2.

26. Orelove FP, Sobsey D. Designing transdisciplinary services. In: Educating Children with Multiple Disabilities: A Transdisciplinary Approach. Baltimore, Md: Paul H Brookes Publishing Co; 1987:chap 1.

27. Special Education in North Dakota, Guide II: Educational Programming for Students with Mild to Moderate Mental Retardation. North Dakota Department of Public Instruction; 1990:165-169.

28. Martin R. Least Restrictive Environment. Urbana, Ill: Carle Medical Communications. Videotape;1989.

29. Rainforth B, York J, MacDonald C. Foundations of collaborative teamwork. In: Collaborative Teams for Students with Severe Disabilities: Integrating Therapy and Educational Services. Baltimore, Md: Paul H Brookes Publishing Co; 1992;chap 2.

30. Guidelines for Provision of Physical and Occupational Therapy in Educational Settings. State of South Dakota; 1988:36-50.

31. Hylton J, Reed P, Hall S, Cicirello N. The Role of the Physical Therapist and Occupational Therapist in the School Setting. Oregon: Project TIES; 1987:15-32.

32. Kansas Guidelines for Occupational and Physical Therapy Services in Educational Settings. Received 1992:15-19.

33. Hardy DD, Roberts PL. The educational needs assessment on physical therapy for special educators: enhancing in-service programming and

physical therapy services in public schools. Pediatr Phys Ther 1989;1:109-114.

34. A Resource Handbook for Physical and Occupational Therapists in Educational Settings. Topeka, Kan: Kansas Chapter of American Physical Therapy Association. Received 1986:53-59.

35. Iowa Guidelines for Educationally Related Physical and Occupational Therapy Services. Des Moines, Ia: State of Iowa Department of Education; 1988:13-14.

36. The Role of Adapted Physical Education, Occupational Therapy, and Physical Therapy in Meeting the Motor Needs of Students with Handicapping Conditions in Educational Settings: Procedures Manual. Denver, Colo: Colorado Department of Education; 1989:36-48.

37. Developmental Adapted Physical Education Program: Entrance and Exit Criteria. Thief River Falls, Minn; 1986.

38. Lindsey D, O'Neal J, Haas K, Tewey SM. Physical therapy services in North Carolina's schools. Clinical Management. 1984;4(6):40-43.

39. Giangreco MF. Delivery of therapeutic services in special education programs for learners with severe handicaps. Phys Occup Ther Pediatr. 1986;6(2):5-15.

40. Sears CJ. The transdisciplinary approach: a process for compliance with Public Law 94-142. TASH Journal. 1981;6:22-29.